

DOCUMENT RESUME

ED 036 277

HE 001 375

TITLE STUDY OF 1964 FRESHMAN CLASS.
 INSTITUTION HOFSTRA UNIV., HEMSTEAD, N.Y. OFFICE OF
 INSTRUCTIONAL RESEARCH.
 PUB DATE 8 MAR 66
 NCTE 5P.
 EDRS PRICE EDRS PRICE MF-\$0.25 HC-\$0.35
 DESCRIPTORS *ACADEMIC ACHIEVEMENT, *ADMISSION CRITERIA, *COLLEGE
 FRESHMEN, COMPARATIVE ANALYSIS, *HIGHER EDUCATION,
 HIGH SCHOOL GRADUATES, *PERFORMANCE, *PREDICTIVE
 VALIDITY, TESTING
 IDENTIFIERS *HCFSTRA UNIVERSITY

ABSTRACT

THE RELATIONSHIPS BETWEEN GRADES OF HOFSTRA STUDENTS AT THE END OF THE FRESHMAN YEAR AND SUCH PREDICTOR VARIABLES AS HIGH SCHOOL STANDING AND SCORES ON THE SAT ARE CONSIDERED. DATA ARE ALSO PRESENTED ON THE OVERALL PERFORMANCE OF THE CLASS AND ON THE RELATIONSHIP BETWEEN PERFORMANCE OF STUDENTS WHO STAYED AT HOFSTRA AND THOSE WHO DROPPED OUT. 95.8% COMPLETED THEIR FIRST SEMESTER, 91.2% THE SECOND SEMESTER AND 77.5% RE-ENROLLED AT THE BEGINNING OF THEIR SECOND YEAR. THE GREAT MAJORITY WHO DID NOT RETURN FOR THEIR SECOND YEAR WERE DOING ACADEMICALLY UNSATISFACTORY WORK. STUDENTS WITH VERY HIGH SCORES ON THE VERBAL PART OF THE SAT DID WELL, BUT SCORES IN THE MIDDLE RANGES HAD LITTLE PREDICTIVE VALUE. THERE WAS A STRIKING RELATIONSHIP BETWEEN HIGH SCHOOL AND COLLEGE PERFORMANCE; ALMOST 90% OF THE STUDENTS GRADUATING IN THE TOP 10% OF THEIR HIGH SCHOOL CLASS OBTAINED PASSING GRADES. IN CONTRAST, ONLY 37.5% OF THE STUDENTS GRADUATING IN THE BOTTOM 40% OF THEIR CLASS EARNED PASSING GRADES. SINCE THERE WAS LITTLE RELATIONSHIP GENERALLY BETWEEN SAT SCORES AND PERFORMANCE, HIGH SCHOOL STANDING SHOULD BE THE OVERRIDING FACTOR IN DETERMINING ADMISSION. (AF)

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H O F S T R A U N I V E R S I T Y
Hempstead, New York

Instructional Research Department

March 8, 1966

MEMORANDUM TO: Assistant President James M. Stuart

FROM: Director of Instructional Research

RE: Study of 1964 Freshman Class

In accordance with your request, we conducted a study of the performance of all students entering Main College, Hofstra, in September, 1964. The purpose of the study was to determine whether there is a relationship between high school decile and college grades, and between entering SAT (Scholastic Aptitude Test) scores and college grades. An ancillary purpose was an analysis of the performance of those students entering Hofstra with poor high school performance and low SAT scores.

Studies done over the past ten years by Dr. Masten, by Dr. Blum, and more recently by Mr. Fracchia, have indicated that it is becoming increasingly difficult to predict the performance of Hofstra students on the basis of high school average and SAT scores. While these indicators were never excellent predictors, they have come to be less valuable as Hofstra has up-graded its student body. These studies indicate that the academic performance of freshmen at Hofstra is best predicted when the range of SAT scores and high school averages is wide. As Hofstra has increasingly eliminated the low-scorers from each entering class, the utility of the predictors has decreased.

In the present report, the relationship between grades at the end of the freshman year and such predictor variables as high school standing and scores on the SAT, will be discussed. To provide a context for this discussion, data will be presented on the over-all performance of the class, and the performance of those students who stayed at Hofstra will be compared with those who dropped out.

Over-all Performance. Data were available on 834 students who entered Hofstra Main College in September of 1964. As indicated in Table I, 95.8% of the students who entered, completed their first semester; 91.2% completed the second semester of their freshman year, and 77.5% re-enrolled at Hofstra at the beginning of their second year.

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TABLE I

Attrition of Students

	<u>Number</u>	<u>Percent</u>
Entered September, 1964	834	100.0
Completed first semester	799	95.8
Completed second semester	760	91.2
Enrolled September, 1965	646	77.5

A statistic referred to as "percentage passing" is especially meaningful in analyzing these data. By "percentage passing" is meant the percent of the given group that had obtained cumulative averages of 2.0 or better. "Percentage passing" of various groups of students is presented in Table II.

TABLE II

Performance of Continuing Students and Drop-outs

	<u>Number</u>	<u>Percent</u>	<u>Percent Passing</u>
Dropped out during first semester	35	4.2	--
Dropped out at the end of first semester	24	2.9	12.5
Dropped out during second semester	15	1.8	20.0
Dropped out at the end of second semester	114	13.7	30.7
Enrolled September 1965	646	77.5	75.4

Examination of this table indicates that 75% of those students who re-enrolled for a second year at Hofstra had obtained average grades of 2.0 for their first year at Hofstra. (It should be noted that only freshmen with averages of less than 1.5 are placed on probation.) This compares with the small percentage of students who had dropped out who had obtained this high an average. The data indicate that only 12.5% of those who dropped out at the end of the first semester, and 20.0% of those who dropped out during the second semester, had attained grade point averages of 2.0 or better. In other words, those students who did not return to Hofstra for a second year were, in the great majority, doing unsatisfactory work according to our criteria.

Scholastic Aptitude Test Scores. The performance of the freshmen on the Verbal and Mathematics sections of the SAT are given in Tables III and IV. Each of these tables indicates the percent of the students obtaining scores within the given ranges, and also indicates what percent of the students in a given range obtained passing grade point averages as defined earlier.

TABLE III

SAT Verbal Scores

<u>Scores</u>	<u>Total Number</u>	<u>Total Percent</u>	<u>Number Passing</u>	<u>Percent Passing</u>
700 - 799	5	0.6	5	100.0
600 - 699	104	13.1	79	76.0
500 - 599	330	41.0	217	65.8
400 - 499	309	39.9	196	63.4
Below 400	<u>43</u>	<u>5.4</u>	<u>29</u>	67.4
Total	791	100.0	526	66.5
Mean	512.1		517.9	
Median	512.5		517.5	

TABLE IV

SAT Mathematics Scores

<u>Scores</u>	<u>Total Number</u>	<u>Total Percent</u>	<u>Number Passing</u>	<u>Percent Passing</u>
700 - 799	21	2.7	16	76.2
600 - 699	158	20.0	109	69.0
500 - 599	297	37.5	203	68.4
400 - 499	272	34.4	170	62.5
Below 400	<u>43</u>	<u>5.4</u>	<u>30</u>	69.8
Total	791	100.0	528	66.8
Mean	528.1		531.2	
Median	526.5		530.5	

The data indicate a definite relationship between very high scores on the verbal part of the SAT and performance in the freshman year at Hofstra. All five students who obtained SAT verbal scores of 700 or above, attained passing grade point averages. Approximately three out of four of those with SAT verbal scores between 600 and 699 attained passing grades. On the other hand, fewer than two out of three of those with SAT verbal scores below 600 obtained such passing grades. This indicates that the students with very high SAT verbal scores are "good risks." Despite the predictive value of the very high SAT verbal scores, the scores in the middle range have limitations as predictors. These limitations are pointed up by the fact that those students who had passing grades of 2.0 or better obtained mean SAT scores that were not very different from those of the total group.

High School Decile. Data pertaining to the college performance of students graduating in various deciles of their high school class are given in Table V. High school decile rather than

high school average is used since there is evidence indicating that the two are very similar and since high school decile is much easier to work with.

TABLE V

Percentage Passing Related to High School Decile

<u>H. S. Decile</u>	<u>Total Number</u>	<u>Total Percent</u>	<u>Number Passing</u>	<u>Percent Passing</u>
1	74	9.5	66	89.2
2	128	16.5	106	82.8
3	147	19.0	110	74.8
4	173	22.3	107	61.9
5	144	18.6	78	54.2
6	61	7.9	34	55.7
7-10	<u>48</u>	<u>6.2</u>	<u>18</u>	<u>37.5</u>
Total	775	100.0	519	67.0

Looking at the data presented in the table, a striking relationship between performance in high school and performance in college is seen. Of those students who graduated in the top tenth of their high school class, almost 90% obtained passing grades in their freshman year at Hofstra. In contrast, of those students who graduated in the bottom 40% of their high school class, only 37.5% obtained passing grades in their freshman year at Hofstra. These data are reinforced by the definite progression that one finds in the data. The "percent passing" in each group is lower than that of the group that did better in high school.

Similar results are obtained when the data are analyzed in a reverse fashion. Thus, when we look at the relationship between performance at Hofstra and high school performance, we find that of the top eleven students in the freshman class at Hofstra, those with the grade point averages of 3.5 or better, all eleven graduated in the top 20% of their high school classes. Nine of the eleven students graduated in the top 10% of their high school classes.

Table VI shows the percentage passing as related to high school decile and SAT scores. The entire class has been subdivided into four groups for this analysis: high decile (1-4) and low SAT (below 500), high decile (1-4) and high SAT (500 and above), low decile (5-10) and low SAT (below 500), and low decile (5-10) and high SAT (500 and above). From this table it can be seen that irrespective of SAT scores, three out of four students from the first four deciles earn a GPA of 2.0 or better while only one out of two students from the lower deciles earn this average. It appears that for this class, high school rank is as effective a predictor when taken alone as it is when taken in conjunction with SAT scores.

TABLE VI

Percentage Passing Related
to High School Decile and SAT Verbal Scores

	<u>Low SAT (200-499)</u>	<u>High SAT (500-799)</u>	<u>Total</u>
High Decile (1 - 4)	74.6%	74.4%	74.5%
Low Decile (5 - 10)	50.9%	51.7%	51.4%
Total	67.0%	66.8%	

This finding is also borne out in the analysis of percentage passing as a function of SAT scores above and below 500. The percentage passing is almost identical for these two groups (67.0% and 66.8%). The only differentiation occurs when the decile ranks are considered.

The performance of the least qualified students admitted to Hofstra can be seen by comparing the low decile-low SAT group with the three remaining groups in Table VI. The percentage passing for this group is significantly lower than the percentage passing in the high decile-low SAT and high decile-high SAT groups. However, this group's academic performance at Hofstra does not differ significantly from that of the low decile-high SAT group.

The implications of these data would seem to be quite definite. We should strongly consider high school standing in making decisions regarding student admissions. The evidence is clear that students admitted from the lower deciles of their classes do not do well. On the basis of the statistical evidence obtained, it would seem justified for Hofstra to consider a policy of not accepting students who graduate below the fourth decile of their high school classes. At the least, all students graduating below the sixth decile should be rejected. At present SAT verbal scores should be given minimal consideration as an indication of academic potential at Hofstra.